

## CLAIMS

What is claimed is:

- 1 1. A method of texture filtering, comprising the steps of:  
2 receiving input information relating to polygon and texture data; and  
3 morphing a texture reconstruction filter characteristic based upon the input  
4 information so that after subsamples are aggregated, an effective filter characteristic  
5 matches the texture reconstruction filter characteristic of a texture reconstruction filter  
6 used for coarse sampling.
- 1 2. The method of claim 1 wherein the input information relates to a rate of  
2 sampling of the polygon data.
- 1 3. The method of claim 1 wherein the input information relates to a degree of  
2 warping per texture coordinate.
- 1 4. The method of claim 1 wherein the effective filter characteristic matches the  
2 characteristic of a bilinear filter.
- 1 5. The method of claim 1 wherein the effective filter characteristic matches the  
2 characteristic of a combination of a bilinear filter and a box filter.
- 1 6. The method of claim 1 wherein the effective filter characteristic matches the  
2 characteristic of a combination of a linear filter between MIP levels and a combination  
3 of a bilinear filter and a box filter.
- 1 7. The method of claim 1 wherein the morphing of the texture reconstruction filter  
2 characteristic is performed in a continuous manner.
- 1 8. The method of claim 1 wherein the morphing of the texture reconstruction filter  
2 characteristic is determined by a value  $\beta = \min(\delta * (n-1)/n, 1.0)$  wherein  $\delta$  is a degree of  
3 warping per texture coordinate and  $n$  is a sampling rate of the polygon data.

1 9. An electronically-readable medium having embodied thereon a program, the  
2 program being executable by a machine to perform method steps for texture filtering,  
3 the method steps comprising:

4 receiving input information relating to polygon data and texture data; and  
5 morphing a texture reconstruction filter characteristic based upon the input  
6 information so that after subsamples are aggregated, an effective filter characteristic  
7 matches the texture reconstruction filter characteristic of a texture reconstruction filter  
8 used for coarse sampling.

1 10. The electronically-readable medium of claim 9 wherein the input information  
2 relates to a rate of sampling of the polygon data.

1 11. The electronically-readable medium of claim 9 wherein the input information  
2 relates to a degree of warping per texture coordinate.

1 12. The electronically-readable medium of claim 9 wherein the morphing of the  
2 texture reconstruction filter characteristic is performed in a continuous manner.

1 13. An apparatus for texture filtering, comprising:  
2 a first module adapted to detect a sampling rate  $n$  of polygon data;  
3 a second module coupled to the first module adapted to select a filtering mode  
4 based upon a sampling rate  $n$  of polygon data and a degree of warping  $\delta$  per texture  
5 coordinate; and  
6 a third module coupled to the second module adapted to compute texel blending  
7 factors based on the filtering mode determined by the second module.

1 14. The apparatus of claim 13 wherein the second module selects a filtering mode  
2 based upon a value  $\beta = \min (\delta * (n-1)/n, 1.0)$ .

1 15. The apparatus of claim 13 further comprising a fourth module coupled to the  
2 third module adapted to detect a degree of warping  $\delta$  per texture coordinate.

1 16. An apparatus for texture filtering comprising:  
2 a filter select module adapted to select a filtering mode based upon a sampling  
3 rate  $n$  of polygon data; and  
4 a texel blending module coupled to the filter select module adapted to compute  
5 texel blending factors based on the filtering mode determined by the filter select  
6 module.

1 17. The apparatus of claim 16 wherein the filter select module determines a filter  
2 characteristic of a selected filtering module based upon the sampling rate  $n$  and a  
3 degree of warping  $\delta$  per texture coordinate.

1 18. The apparatus of claim 16 wherein the filter select module selects the filtering  
2 mode based upon a value  $\beta = \min (\delta * (n-1)/n, 1.0)$ .

1 19. An apparatus for texture filtering, comprising:  
2 means for receiving input information relating to polygon data and texture data;  
3 and  
4 means for morphing a texture reconstruction filter characteristic based upon the  
5 input information so that after subsamples are aggregated, an effective filter  
6 characteristic matches the texture reconstruction filter characteristic of a texture  
7 reconstruction filter used for coarse sampling.